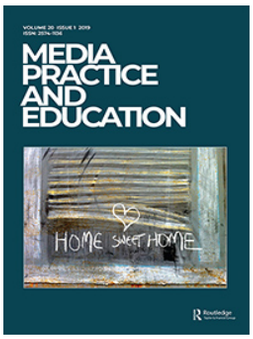

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'Where is my Googleplex?' Rethinking vocational learning and teaching spaces for Digital Media curriculums

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ABSTRACT

This paper argues that academic institutions need to consider how the learning spaces shape the behaviours of students and the pedagogies of academic staff in the delivery of Digital Media curricula. It looks at the existing provision of space in the form of computer labs and identifies how media departments could learn from the media industry, as they have in more traditional broadcast settings, to develop spaces to simulate industry practice. We argue that Lab spaces create teacher-dependant learning environments, and influence and restrain the learning experience in negative ways which promote approaches to teaching and learning which do not help graduates develop the skills and attributes they will need to work in the sector.

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Digital Media; pedagogy; learning spaces; curriculum development; vocational teaching

Introduction

This paper will focus on the use of 'Lab' space for the delivery of practical sessions using computer-assisted learning inside Media departments, where the focus of the teaching programme is on activity-based learning. The changing landscape of media production in the creative industry sector, beyond that of the broadcast environment, requires media students to gain specialist, discipline-specific subject knowledge alongside, and intertwined with, skills in software and programming languages to enable them to deliver and publish media content across the range of digital platforms. In this paper, we refer to those Media courses that are 'beyond broadcast' as Digital Media courses. By Digital Media we mean those courses that come under titles such as 'New Media', 'Interactive Media', 'Web Production', 'Multimedia' and 'Digital Cultures'. While we acknowledge that most media production (including broadcast media) is now digital, we are referring to courses that have been developed to study the media since the rise of the internet, those courses which encourage students to negotiate with and make media content for online distribution and consumption. Convention has seen the dissemination of these Digital Media skills and techniques in further and higher education operate through the traditional computer Lab spaces, both in terms of the teaching style, and furniture provision. This paper argues that this current adopted model of provision is not appropriate, and highlights that such spaces hinder academic staff in the delivery of appropriate pedagogy; creates students who become dependent on one fixed source of knowledge; and drives

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both teaching staff and students towards models of learning and teaching which are not in line with the needs of the creative industries. Furthermore, we argue that Lab spaces prevent fostering the combination of the logical reasoning of linear thinking with the creative response from lateral thinking often termed Diagonal Thinking (Skillset 2011, 44)

This paper is informed by observations made during a number of Connected Funded visits to Academic Institutions and Digital Media Industry Hubs across the UK between 2010 and 2016 and ongoing discussions with the Media Industry and Creative Industries sectors across the UK. These visits have been supplemented by conversations with national representative bodies such as The Association for UK Interactive Entertainment (UKIE), Creative Skillset and more regional and local representative bodies such as Digital Circle to underpin the observations. These visits allowed researchers to tour media facilities in a wide range of academic institutions and have direct and open conversations with representatives from across the digital sectors. Visits were made to Birmingham City University to reflect on the new Parkside campus investment, Salford University to tour their new school in the heart of Media City, and Ravensbourne to explore their Greenwich Peninsula development. While visiting these academic institutions researchers also toured a range of connected Digital Media industry partners in London, Birmingham, Salford and Manchester. These 'official' visits funded through the Connected programme were balanced with more informal visits to other Academic facilities such as Bournemouth Universities Faculty of Media and Communication, Abertay University's School of Arts Media and Computer Games, and Manchester Metropolitan University's Digital Innovation facility 'The Shed'. These national visits were also compared with observations during a visit to d.school at Stanford University. A number of consistent messages have been identified from the data gathered during these field visits. Primarily, the creative media industry and associated organisations find themselves challenged by the rapid-pace of changing technologies. As a consequence, the reality of this new world requires them to problem-solve, innovate and perform in a more complex, agile and fast-paced environment. In responding to these challenges, the companies observed through the field visits identified that physical working environment is integral to building high-performance teams within the workplace, and can operate as part of the strategy to amplify the competitiveness of their business. Consequently, we observed during these field visits that cubicle-like workstations have been replaced by both formal and impromptu collaborative workspaces to intervene in traditional work behaviours. Rather than working in isolation, the layout of the buildings and associated furniture operate to both maximise opportunities for large team collaborative working, and provide smaller intimate spaces for quiet reflection and/or one-to-one conversations. Importantly, it was observed during the field visits that the life-cycle of creative projects required alternate environments: large team spaces for idea generation; more intimate spaces for small team and/or individual working during the incubation phase, and medium-sized spaces to accommodate team delivery during the planning and execution phase.

This paper addresses the disconnect between the learning experience generated by the traditional Lab learning experience by media students in further and higher education and the direction of change in providing spaces for innovation as observed in these field visits. The paper maps the behaviours of students in the current space provision and reveals the effects of physical space on the current mode of learning experienced by students studying Digital Media. By highlighting the key indicators that are changing the nature of the

roles and responsibilities of those that work in the creative media sector, this paper argues that the delivery of an appropriate Digital Media curriculum needs to focus on the restructuring Lab space provision, and subsequently recommends a range of interventions in physical teaching spaces that would be informed by and/or simulate current industry practice.

Vocational roles in Digital Media

It is often proposed that Media as a subject is a prime discipline to promote a hybrid model for course structures which mix the traditional academic with practical and vocational approaches to curriculum design and delivery. Pemberton focuses on a strategy for Vocational Media and explains that these sorts of curriculums should encourage ideas, experimentation and a space to develop a unique authorial voice. Vocational education in media should 'encompass the technical, theoretical and creative skills' graduates will need to work in the media industries (Pemberton 2011). To encourage these, students need Vocational Teaching Spaces for Digital Media especially if we are to follow calls from other educational settings to consider the learning environment as the 'third teacher' which shapes the behaviour of the learner and the pedagogy enacted in the space (O'Donnell Wicklund Pigozzi and Peterson et al. 2010).

Buckingham addresses the uptake of digital learning technologies in media departments as being 'seen to promote authentic, student-centred, creative learning and play a key role in "upskilling" the labour force for competition in global markets' (Buckingham 2013, 28). There is a clear link between the skills-based approaches and the work place as these skills are often seen as vocational and subject specific. Vocational Teaching Spaces, therefore, are rooms which require discipline-specific specialist equipment to perform discipline-specific industrial roles (JISC 2006, 16). These spaces are used to simulate working environments to prepare students for the spaces of employment. They should encourage craftsmanship, functional literacies and a business-like attitude (Lucas, Spencer, and Claxton 2012) but also reflection, critical thinking and creativity. In some areas of the media curriculum, there is some provision for students with such spaces. An example is replication of TV studios to simulate industry models in media corporations. It would seem that there is a polarity in the resourcing of these vocational teaching resources across departments; institutions invest heavily in radio studios which are 'industry spec', edit suites and software that are 'industry standard' and photography studios which afford students the opportunity to be 'work ready' but often give little consideration to what is needed within the emerging Digital Media disciplines.

The teaching which happens within these existing vocational learning spaces is centred on skills acquisition and often block taught to increase institutional room utilisation and mimic project-based approaches in industry. Students tend to work in teams, each mimicking a fixed job role from set industrial models. This methodology and pedagogic approach is necessary to make sure that students have the technical competencies to use the tools and software to deliver on the modules learning outcomes (often aligned to job specs). The delivery in these spaces is usually to warm or live briefs from industry, which consist of students working to client briefs that companies have already delivered on; creating a simulation of the project and process, in a simulation of the working environment. This simulation then is not just a simulation of spaces, but a simulation of

workflow, processes and procedures that companies follow to presumably produce a 'business-like attitude' and promotes a culture in the classroom. If students who wish to work in roles in Television have access to a simulated TV studio, and we have a duty to the students to provide parity across programmes, it follows that Digital Media students should have opportunities that marry with their graduate employment ambitions. It is, therefore, necessary to understand the employment roles in Digital Media and align our exit trajectories to enable graduates the best chance of securing these.

The technological requirements of the simulated TV studio space revolve around expensive broadcast quality cameras costing tens of thousands of pounds, installed and engineered for that specific studio space and all hardwired back to an even more expensive TV gallery.

> the journalistic production process in the TV studio is often organized and heavy equipment is used to foster time-saving working practices that were originally intended for mass production. In multi-camera work, the expensive studio resources and timetables are usually designed in such a way as to make it resemble work on a conveyor belt. (Rautkorpi 2012, 165)

The approach to teaching in the TV studio, therefore, relies on students being responsible for and able to operate very specific pieces of equipment within very limited technological parameters, most often predefined by the technical team (rather than the lecturer) responsible for the space. In fact, the operation of TV studios has become so procedural and (dare we say it), 'uncreative' that major broadcasters, including the BBC, are replacing camera operators with robots (BBC 2017).

The Digital Media student does not need hugely expensive cameras, editing desks or lighting. Their work is most likely to be completed on their own laptops from conception, design and production all the way through to deployment and distribution. While there is not much scope for diverse creativity in the approaches to TV production and the genre expectations of TV's longstanding formats; Documentary, News, etc., the open-endedness of publishing Digital Media content online or in-app allows more space to explore and expand creative approaches to Digital Media outputs. The perpetual beta status of most games on the app stores is a good example. The developers are free to add more content, power ups and prizes to their published titles and in doing so explore new ways of engaging consumers in their productions.

Appreciating that many students will bring their own device with work-in-progress, all their files loaded and their machines customised, Digital Media students are often frustrated by the computing facilities provided by media departments. The customisation of the computer with their favourite keyboard shortcuts to optimise workflow and production pipelines, typefaces installed for their specific projects, scripts written to automate procedural tasks in the background while they work on more complex tasks, and the systems optimised for their idiosyncratic working patterns can be considered as part of the craftsmanship and functional literacies needed for their discipline and the machine as their discipline-specific equipment. The facilities that are provided for them cause frustration when they cannot download content, software updates or even typefaces to machines installed in the Lab. It could be the ubiquity of the laptop which makes it overlooked as a form of discipline-specific equipment, or its distributed ownership by the students rather than the department which leads to misconceptions about use, but the facilities the department provides must support their use in

very specific ways to support the learning and teaching. Any Digital Media vocational teaching space should show consideration for users bringing their own devices; robust Wi-Fi, extra monitors to expand small laptop screens and wireless file sharing, printing and screen mirroring will all allow team working and idea sharing. Furthermore, we should be encouraging students to creatively 'hack' both hardware and software to build new apps, interactive experiences and connect devices in new and interesting ways and usually, the software and access to the hardware needed to do this is locked out in the identical PC's in the Lab.

Digital Media job roles evolve much faster than, say traditional TV or Film job roles. To that end, both from working in the industry and talking to employers, flexibility and a willingness to adapt are crucial qualities in any Digital Media graduate. With the endless march of technology and the shifting economic and industrial landscape change occurs frequently in the discipline and will continue to do so. It is, therefore, imperative that we set our curriculum to enable students and graduates to evolve, learn, up-skill and cross-skill as the industry requires. This is highlighted in the 2011 Creative Skillset report: 'The stock of workers currently employed often do not have the adaptability and investment in development technological change demands' (Skillset 2011, 45). Our graduates need to be independent, lifelong learners, perhaps with a greater appetite for change than in many other subjects and we need to address how the learning spaces of the campus foster this.

The Digital Media industry is aware of the pace of change and the skills needed to succeed in this fast-paced environment, 'On the whole across the Creative Industries sector skills gaps are intensifying. This is in part due to the speed of digital change being enjoyed by most employers' (Skillset 2011, 45). To that end, the 'industry' has certain criteria that it looks for in graduates. Prefacing the skills gap the Skillset report makes it very clear that '"Diagonal thinking" (i.e. those able to think creatively and practically) are the skills requirements of the day' (Skillset 2011, 44).

The Skillset report claims that 'FE/HE integration with the sector's employers has some way still to develop so that new entrants leave colleges and universities more "job ready" than they presently seem to be' (Skillset 2011, 45). Therefore the desired exit trajectories of Digital Media graduates must include appropriate technical, practical and job-specific skills which form part of the core values of the course alongside more traditional academic skills around critical enquiry, research, reflective practice and considered scholarship. At some stage, we must engage the students in 'customer' focused work, for example, live brief or external client work, to give them the experience of 'customer handling'. The exit trajectory should also involve completing problem-solving events both under supervision in class and externally, possibly as part of work experience or live client work. Finally, our graduates need to learn about management skills, again at module level, on work experience and live client briefs and on exit from the project be able to demonstrate these in a portfolio and on their CV's. These sorts of activities are best undertaken in small groups which resemble the small clusters of creatives who form design agencies, replicating working dynamics and roles that students wish to progress into. The learning and teaching spaces need to facilitate these and promote these patterns of pedagogy to help students develop the methodologies and approaches needed to transition into graduate level roles.

The Lab

The Lab is a familiar and formal teaching space for most staff teaching Digital Media in an academic setting with a number of recurring attributes or commonalities across campuses and institutions. The Lab is not the only learning space that is utilised by staff on Digital Media courses and not the only learning space that the students from Digital Media courses experience, but it is one of the priority spaces with specialist discipline- and course-specific provision such as specialist software. The Lab as a digital learning facility usually consists of a large room with varying degrees of natural light. Natural light is usually limited for practical reasons, to reduce glare on screens, instead lighting the space vertically, with flat artificial fluorescent lights which are reminiscent of traditional corporate office working spaces. The walls are usually blank, white or magnolia, with authoritative posters blue-tacked to them which outline the rules of the space. Typically, there is a 'teaching machine' at the front of the room (which can often be distinct from the student machines either by technical specification, placement or cost) and a projector as a second screen to the 'teaching machine' for students to view content from the staff computer. This screen and the position of the teaching machine helps to dictate a front to the room, and delineates a space for the teaching to take place. Lab furniture is normally a series of fixed desks with computers facing forward so that the student can see both the projection at the front of the class and their own monitor to help cross check their work and process against the work of the teacher. Each student workstation is usually exactly the same, and a technician is usually required to reset the computers periodically to maintain their uniformity. Specialist software is usually installed to 'freeze' the computers so that any modifications by the students are reset after they log out of their account to retain consistency and uniformity.

The structure and layout of these spaces lean towards a teaching and student experience in which the space can start to form or dictate the pedagogy and use. This is addressed in the 2006 JISC report which has been a heavy influence on the development of this paper and our thinking around how space affects learning behaviour and pedagogy. The report states:

> Audio-visual cues and changes in furniture layout can assist learners' navigation around the building, and help them to adjust their behaviour according to the purpose of the space. These represent shifts in attitude that welcome and support all types of learners and promote different ways of learning. (JISC 2006, 4)

The fixed nature of these Lab spaces, where students face the teaching staff resembles more of a call centre, factory or 'battery hen' computer laboratory (Jamieson et al. 2010, 223), than the working spaces of design agencies, Digital Media agencies, or start-ups which are often the desired exit trajectories aligned to the courses taught in these spaces. The Lab mimics old industrial models of production rather than those adopted and promoted by the creative economies. The format of the space shapes the behaviour of both the academic and the student, which can hinder responsive, student-centred learning. The formal, inflexible space fails to promote the skills, attributes and core values that a Digital Media course needs to help it respond to the shifts in job roles, restructuring of labour and the ongoing needs of the creative industries. The space cannot be considered a vocational space as it fails to promote the freedom of movement;

both physically and mentally, needed to foster discipline-specific vocational expertise. A vocational learning space should be considered as one which promotes behaviours, literacies and expertise aligned with the career goals of the curriculum and manifests physically through the space or setting and also in the culture performed in the space by the learners and the academic staff as outlined by Lucas, Spencer and Claxon:

> Vocational settings also cultivate routine expertise, resourcefulness, functional literacies, craftsmanship, business-like attitudes and wider skills, and these desiderata will have implications for choice of both physical setting and in determining the most conducive learning culture. (Lucas, Spencer, and Claxton 2012, 100)

These Lab spaces focus on the acquisition of technical skills and 'best practice' which could be considered as routine expertise and craftsmanship by Lucas, Spencer and Claxton but they lack the physical characteristics to help practice and promote a wider understanding of the attributes and attitudes needed in Digital Media graduates past the technical skills with software and code.

Pedagogy of the Lab space

The 'battery hen' computer Lab is designed and structured in such a way that it pressures the lecturer into a 'follow the leader' style scenario, a traditional delivery technique which is suited towards developing technical proficiency and demonstrating approaches to tackling specific tasks using software. Good pedagogic practice emphasises the need to create learning experiences that are based upon what is personally meaningful, relevant and engaging to the student: student-centric approaches. However, the Lab promotes either a wholly atomised learning experience where students follow tutorials individually, or a completely collective experience based on a follow the leader model which we consider to be a teacher-dependant and teacher-centred learning model. When the follow the leader lesson is employed, often it is designed so that all students do the same activity, at the same pace, and at the same time to maintain the flow and continuity between what the lecturer is demonstrating and what the students are replicating. The lecturer becomes the fixed source of knowledge as Jessop et al. argue: 'that familiar, computer-networked and conventional spaces may re-inscribe hierarchical, teacher-centred approaches' (Jessop, Gubby, and Smith 2012, 189). Each student begins and ends at the same point. If each student begins at the same point, both technically and creatively, that suggests each student is similarly capable, technically able and comes with the same level of skill, and prior knowledge to each Lab session. Unfortunately, with the restrictive nature of the space, and the follow the leader style lesson, staff find that they often need to compromise on what they know is good pedagogic practice and deliver a reduced version of the lesson to cater to a mixed ability group with differing prior knowledge and understanding of the processes, methodologies and workflow.

In arguing for an intervention in this current use of space that moulds these particular teaching and learning behaviours, it is important to highlight that the use of space is integral to notions of student engagement, where understanding how students engage with their learning is seen as an evolving construct that captures a range of institutional practices and associated student behaviours (Trowler 2010; Kahu 2013; Bryson 2014). Research

into student engagement draws together insights about the activities that tend to generate high-quality learning.

> The concept of student engagement is based upon the constructivist assumption that learning is influenced by how an individual participates in educationally purposeful activities. (Coates 2005, 26)

As student engagement data currently operates to benchmark quality assurance in the higher education sector, understanding how space in the learning environment operates as a transformative agent in the co-construction of knowledge, therefore, needs to be part of the discursive element when promoting practices that are most likely to generate productive learning. Within a framework mapping space to enhanced learning, understanding how space operates to involve students in learning processes that are both individual and collaborative is a key underlying factor in the student engagement debate.

> When institutions provide opportunities for students to learn autonomously and with others, and to develop their sense of competence, students are more likely to be motivated, engage and succeed. (Zepke and Leach 2010, 170)

How students discover and learn, is part of a pattern of behaviour that is inherently social. Social interactions affect an individual's goals and decision-making process and aid the process of integrating ideas and knowledge into actionable information (Pentland 2014). Within Digital Media work, processes in which interaction and collaboration with others are required, reveal themselves at different parts of the iterative design process (preparation, incubation, illumination and verification). Engaging with others aids the ideas part of the process (preparation and verification), while disengaging with others is necessary to aid design processes where concentration and quiet thought are required to resolve learning outcomes (incubation and illumination). Pentland highlights that providing opportunities in which students can alternate between small group interaction and large group interaction will provide a favourable environment in which ideas can grow.

A move to a more open space may also address engagement indicators that favour a more personalised approach to pedagogic practice, for example, 'kinaesthetic learners' (Fleming and Mills 1992, 141) and those who need to move to think. Fleming has previously identified a similar issue:

> In a tertiary education system we should feel sorry for the kinaesthetics, who prefer their teachers to use field trips, experiments, role plays, games and experiential learning because those hands-on methods are seldom used. (Fleming 1995, 309)

The fixed layout of the Lab space prohibits many of these engagement indicators. The rigidity of the Lab space, therefore, makes the challenging task of teaching for differing learning styles even more problematic as it promotes fixity, where each student is located at a workstation, undertaking the lesson either as a collective or atomised learning experience.

Desks in the Lab are immovable, inflexible and permanent. Cables are tied to the desk and workstations locked with security wire. This prevents freedom of movement of students, equipment and ideas. Students in this setting become fixed and in a sense installed as much as the computer or software. The nature of the space, and its formality means that students become conscious of movement, and as the division of the space mimics that of a

lecture theatre with a fixed front where the teacher stands to deliver the session; students have pre-conceived notions of the behaviour that is expected of them inside these spaces. The fixity of the space and furniture, and the atomised nature of the students, each working on an individual machine and screen also hinders group activity and suppresses group dynamics. Any Digital Media vocational teaching space should show consideration for a flexibility of room configuration, allowing for students to huddle and work collaboratively as well as individually. There should be provision for areas of the room where students collaborate with each other without the computers, and can easily introduce laptops into their work scenarios. Ideally, the desks and computers should be flexible and moveable so that they can be configured and reconfigured to match the learning tasks and activities for the curriculum. There should be provision for the different stages of the production cycle where students can work at different collaborative scales; large team spaces for idea generation; huddle spaces or team tables for small group and/or individual working during the incubation phase, and medium-sized spaces to accommodate team working during the planning, development and project delivery.

The disruption caused by moving through a virtually static environment is similar to the disruption generated when students talk to each other in a largely silent environment. If students are watching the lecturer and 'following' or 'copying' their actions during Lab sessions, it leaves little space for peer to peer learning or collaborative support structures. If they try to discuss ongoing work they will either be interrupting the lecturer, or distracting their peers from the ongoing follow the leader session. Furthermore, if they wish to discuss the work with a peer on the other side of the room they are unlikely to move from their workstation, traverse the room and discuss the work while the lecturer is 'leading' and everyone else is 'following'. The layout of these spaces and its limitations also means that movement across the space would cause students to obstruct the view of their peers from the front focal point of the Lab.

What is perhaps more concerning is; if a student is finding it difficult to 'follow' the lecturer they are unlikely to stop the lecturer to ask for help. Smith is mindful of this when considering traditional delivery formats:

> In theory a student can also ask questions in a university lecture, but it takes more courage than most have to stop a lecturer in full spate and, in front of 50 or more (semi-) strangers, ask what he/she means. (Smith 2003, 94)

There are a number of reasons for this. The student feels it is inappropriate to stop the lecturer because then everyone else has to stop, stopping the collective experience. The student may also feel that the virtual silence around the room means his peers comprehend the session, and asking any questions may come across as an admission of stupidity, separating them from the collective experience.

Towards more suitable vocational teaching spaces

It is important to consider then, what spaces and facilities academic institutions should supply for students to learn industry standards. Buckingham stresses the instability of the market place and industry, that graduates need to be 'mobile, multi-skilled and flexible, and adapt to the stresses of a "portfolio" lifestyle' (Buckingham 2013, 30). He also emphasises the informality of these companies, with a deliberate non-corporate style

and flattened hierarchies. There is a substantial disconnect then between the teacher centred, formal Lab, with identical workstations and an inflexibility of furniture and working patterns and the style, space and approach of the new digital creative economies. We need to address the aim to 'foster truly flexible, creative and adaptive minds, we need to look more critically at the extent to which learning space designs promote innovative ways of thinking' (JISC 2006, 14).

In the remaining paragraphs, we review possible approaches to building more appropriate vocational spaces for teaching and learning Digital Media. The types of space used in Digital Media workplaces are set up to facilitate 'creativity'. Across the sector key features of the workspaces can be observed. These vocational workspaces show consideration for the following elements; use of colour, use of imagery (on the walls), use of space, connectivity, promotion of team work, facilitation of clients and fostering and nurturing ideas.

There are a number of key examples of good practice nationally such as the *Disruptive Media Lab* at Coventry University, and famously the *d.school* in Stanford, which focus on creating space for interdisciplinary working methods. These spaces directly affect the learning approaches that are enacted within them, but their focus is on fostering interdisciplinary approaches and they often sit outside of School or Faculty structures. The approaches in these spaces have heavily influenced the thinking, which underpins this study, and the recommendations which will follow, but those spaces focus on tackling a separate set of issues rather than targeting vocationalism in Digital Media. The aesthetic and ethos of these spaces are heavily influenced by the sorts of design studios that we think it is important to emulate and signal a shift in the approach to embedding vocational practice in Digital Media education.

Mashable's (an online industry focused magazine) feature on workspaces for the Digital Media sector provides useful insight into the way Digital Media employers use their workspace. The workspaces in the Digital Media industry often use colour to inspire the employee. The digital director from *Media Safari* argues that the office design is a key element in their success stating in an article published 9 August 2011, that office design has the 'potential to have a dramatic effect on mood, motivation and productivity. This impacts how people feel at work and the quality of our ideas' (Turner 2011). We could consider these as part of the culture outlined previous by Lucas, Spencer, and Claxton (2012). This contrasts sharply with the blank, white or magnolia walls that our students are surrounded by in our Labs. Sometimes these expanses of blankness are broken up with rules about eating and drinking or fire exit signs, but rarely, if ever, with colour, art or subject relevant posters and inspiration. *Media Safari* links the feel of the space, and its furnishings to the core values of the company. The use of inspiring imagery is neglected from the Lab space as it is expected to have flexible disciplinary use for multiple programmes of study. Therefore, the emptiness of the surroundings is deliberate. If Digital Media agencies can link their work spaces to the core values of their company through the decor, then the blankness of the Lab space signifies its absence of core values with regard to a specific discipline.

Some UK institutions have begun to promote similar approaches to spaces in academia. The experimental creative space set up at Brighton University used similar techniques to stimulate learning:

> The impact of the coloured bean bags and lights, the projected images, the music and the curved wall, individually and in combination, may well help stimulate the energy needed for intuitive and open-minded exploration that breaks boundaries. (Martin 2010, 75)

Martin (2010) focuses on the effects of the space to help foster creative responses and promote the core values of their courses. Open-minded exploration is difficult to achieve when students expect and are encouraged into the follow the leader mentality of learning which the Lab space defines.

JISC's work on space design emphasises a shift away from simple replication or simulation into a model which allows technology-assisted learning to accompany the subject-specific equipment in vocational teaching spaces (JISC 2006, 16). This would allow students to reflect on the processes they have undertaken and encourage a deeper engagement with why they have undertaken certain tasks.

With this in mind, it is still important that some of the spaces that we teach Digital Media in replicate or simulate the working spaces of agencies, studios and workshops that the graduates wish to progress into. We should look to scaffold their experience out of the regimented Lab which closes opportunities for creativity, collaboration, inspiration and diagonal thinking and look to create open, flexible and reflective spaces to teach Digital Media.

The flexibility of space and the ability to easily reconfigure the workspace to match the group dynamics and the projects' development stage can be seen in industrial examples such as game studio *Valve* which famously only has desks on wheels so that teams can rearrange the studio to collaborate more effectively. This approach to flexibility is matched in some academic institutions such as d.school where all furniture is on castors and nothing is fixed (Doorley and Witthoft 2012).

It is not to say that there is no place for a Lab environment, and follow the leader sessions are redundant, but that these spaces need to be supplemented with what we argue are more important spaces which promote the sorts of approaches needed to produce graduates for the Digital Media industries.

It is not enough to allow limited access to a space with a computer and software. The space needs to allow new forms of student-centred pedagogy, active learning and skills acquisition to take place, and for students to shift focus from the dissemination of knowledge and skills to the fostering of approaches and methodologies which closely resemble the working environment that they aspire to progress to. It is more than a matter of workstation; we need to engage students in critique of workflow, process and craft. The Lab space is designed around traditional hierarchical models of Higher Education, and with pedagogic and industrial models moving away from this we need to allow the pedagogy to determine the design of the space, making flexible, open plan, responsive and student-focused spaces:

> Open-plan informal learning areas provide individualised learning environments which also support collaborative activities […] utilization data have proved the worth of such areas – their value lies in the way they encourage learning through dialogue, problem solving and information sharing in the most supportive contexts. (JISC 2006, 4)

In response to these issues we would propose the installation of spaces in academic institutions which simulate the working environments of Digital Agencies and a curriculum to deliver in these spaces which helps to promote the graduate attributes that student will

need to process into the Digital Media industries. Any Digital Media vocational teaching space should show consideration for work environments which focus on problem-solving, innovation and perform as a more complex, agile and fast-paced environment. The classroom environment must be designed to be integral to building high-performance teams within project-based learning, and can operate as part of the strategy to amplify the effectiveness of the students and project workflow. These spaces need to direct the students focus to the activities and the team, providing the tools and facilities to work flexibly and promote agile working patterns. These spaces need to focus the students on the team and task, rather than the teaching staff, to help them work more effectively mimicking the emphasis on informality of these companies, with a deliberate non-corporate style and flattened hierarchies. These spaces, like the TV, Radio and Photography studios which have come before them should help to mimic industry practices and promote both the professional skills and approaches that are needed in our graduates. If it is important to invest in spaces which simulate the working environs of traditional broadcast media, it is equally, if not more important to invest in spaces which help to promote the skills needed by the emerging creative industries. These spaces will need to be responsive to the needs of the students and academic staff, cater for new approaches to curriculum delivery which align with the aims of the course, and help both the academic staff and the students work in new ways which simulate the working patterns that graduates will need to have experienced.

Conclusion

We propose then, a consideration of what role academic institutions play in the delivery of Media curriculums and what facilities are needed to ensure that students have the necessary skills and subject knowledge needed by the work roles they wish to fill. Media departments should look towards open plan, creative spaces, and a focus on the student rather than the lecturer. These spaces should be networked, flexible and able to foster creativity, peer support and skills development rather than a 'one to many' model of skills dissemination. The shift in focus to the student reformats the space and the pedagogy which can be enacted inside this space. It also aligns the curriculum and delivery of that curriculum closer to the needs of the creative industries. The problematic Lab setup and the pedagogical restraints that accompany it can be reformatted to allow for participatory, engaged learning by reorganising the spaces as they are in the Digital Media industry. If we can learn lessons from the Digital Media industries in how they use their spaces to facilitate team work, client liaison and the fostering of ideas, we can radically rework our pedagogy to engage students in work readiness, participatory education and independent learning.

Recommendations

With the increased focus on course employability and balancing vocational education with academic study in the UK Higher Education sector, we have argued that to best provide for students on Digital Media courses we must reconsider the learning environment to promote students engaging in the craftsmanship, functional literacies and a business-like attitude as the 'third teacher'. These spaces should simulate industry environments

and work patterns to help promote students and teaching staff to enact appropriate pedagogies and approaches to learning.

Drawing on observations from across leading institutions in the UK, visits to international innovators and surveys of digital agencies we would recommend the consideration of spaces which:

- focus on the student rather than the teacher, with no front to the room to simulate the informality of the contemporary Digital Agency, which it replicates, with a deliberate non-corporate style and flattened hierarchical structure;
- are flexible and connected with no fixed furniture so that they can be easily reconfigured to facilitate the learning that needs to take place at the particular point in the project development cycle;
- use technology to foster connections and collaboration with robust Wi-Fi, extra monitors to expand small laptop screens and wireless file sharing, printing and screen mirroring to encourage peer-support and collaborative work patterns;
- encourage students to creatively 'hack' both hardware and software to develop and hone their individual approach to their craft and project development. The facilities should allow students to take ownership over the discipline-specific equipment, whether it is provided by the department or the student to promote experimentation, iteration and exploration;
- provide areas of the space where students collaborate with each other without the computers, and can easily introduce computers into the work scenarios;
- provide space which recognises the different stages of the production cycle where students can work at different collaborative scales; large team spaces, huddle spaces or team tables for small group and space for individual working.

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References

BBC. 2017. "Robotic Camera Systems." *BBC*. Accessed July 3, 2017. http://www.bbc.co.uk/academy/technology/article/art20140313104307334http://www.bbc.co.uk/academy/technology/article/art20140313104307334.

Bryson, Colin. 2014. *Understanding and Developing Student Engagement*. London: Routledge, Taylor and Francis.

Buckingham, David. 2013. "Teaching the Creative Class? Media Education and the Media Industries in the Age of 'Participatory Culture'." *Journal of Media Practice* 14 (1): 25–41.

Coates, Hamish. 2005. "The Value of Student Engagement for Higher Education Quality Assurance." *Quality in Higher Education* 11 (1): 25–36.

Doorley, Scott, and Scott Witthoft. 2012. *Make Space: How to Set the Stage for Creative Collaboration*. New Jersey: Wiley.

Fleming, Neil D. 1995. "I'm Different; Not Dumb. Modes of Presentation (VARK) in the Tertiary Classroom." In *Research and Development in Higher Education, Proceedings of the 1995 Annual Conference of the Higher Education and Research Development Society of Australasia (HERDSA)*, edited by A. Zelmer, *HERDSA* 18, 308–313. http://vark-learn.com/wp-content/uploads/2014/08/different_not_dumb.pdf.

Fleming, Neil D., and Colleen Mills. 1992. "Not Another Inventory, Rather a Catalyst for Reflection." *To Improve the Academy* 11: 137–155. http://vark-learn.com/wp-content/uploads/2014/08/not_another_inventory.pdf.

Jamieson, Peter, Kenn Fisher, Tong Gilding, Peter Taylor, and A. C. F. Trevitt. 2010. "Place and Space in the Design of New Learning Environments." *Higher Education Research & Development* 19 (2): 221-236 doi: 10.1080/072943600445664.

Jessop, Tansy, Laura Gubby, and Angela Smith. 2012. "Space Frontiers for New Pedagogies: A Tale of Constraints and Possibilities." *Studies in Higher Education* 37 (2): 189–202. doi:10.1080/03075079.2010.503270.

JISC (Joint Information Systems Committee). 2006. "Designing Spaces for Effective Learning: A Guide to 21st Century Learning Space Design." JISC. Accessed July 3, 2017. http://www.webarchive.org.uk/wayback/archive/20140616001949/http://www.jisc.ac.uk/media/documents/publications/learningspaces.pdf.

Kahu, Ella R. 2013. "Framing Student Engagement in Higher Education." *Studies in Higher Education* 38 (5): 758–773. doi:10.1080/03075079.2011.598505.

Lucas, Bill, Ellen Spencer, and Guy Claxton. 2012. "How to Teach Vocational Education: A Theory of Vocational Pedagogy." City & Guilds Centre for Skills Development. Accessed July 3, 2017. http://www.winchester.ac.uk/aboutus/lifelonglearning/CentreforRealWorldLearning/Documents/How-to-teach-vocationaleducation Bill Lucas Ellen Spencer and Guy Claxton.pdf.

Martin, Paul, ed. 2010. "Making Space for Creativity." University of Brighton. Accessed July 3, 2017. http://about.brighton.ac.uk/creativity/resources/books/UofB_msfc-ebook_FINAL.pdf.

O'Donnell Wicklund Pigozzi and Peterson, Architects Inc, VS Furniture, and Bruce Mau Design. 2010. *The Third Teacher: 79 Ways you can use Design to Transform Teaching & Learning*. New York: Abrams.

Pemberton, Alison. 2011. "Vocational Media." *A Manifesto for Media Education*. Accessed July 3, 2017. http://www.manifestoformediaeducation.co.uk/2011/06/alison-pemberton/.

Pentland, Alex. 2014. *Social Physics, How Good Ideas Spread – The Lessons from a New Science*. New York: Penguin Press.

Rautkorpi, Tiina. 2012. "Interaction as a Tool for Developing a Studio-Based TV Talk Show." *Journal of Media Practice* 13 (2): 163–176. doi:10.1386/jmpr.13.2.163_1.

Skillset. 2011. "Sector Skills Assessment for the Creative Industries of the UK." *Creative Blueprint* Accessed July 3, 2017. http://creative-blueprint.co.uk/library/item/strategic-skills-assessment-for-the-creative-and-cultural-industries-sthash.03ob3lXQ.dpuf.

Smith, Keverne. 2003. "School to University: Sunlit Steps, or Stumbling in the Dark?" *Arts and Humanities in Higher Education* 2 (1): 90–98. doi:10.1177/1474022203002001008.

Trowler, Vicki. 2010. "Student Engagement Literature Review." Higher Education Academy.

Turner, Amy-Mae. 2011. "15 Digital Agency Work Spaces that Evoke Creativity." *Mashable*, August 29. http://mashable.com/2011/08/29/digital-agency-offices/.

Zepke, Nick, and Linda Leach. 2010. "Improving Student Engagement: Ten Proposals for Action." *Active Learning in Higher Education* 11 (3): 167–177. doi:10.1177/1469787410379680.